

REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Claims 1, 2, 4, and 5 have been amended for clarity. The amendments are considered to be non-narrowing, and no estoppel should be deemed to attached thereto.

Claims 11-17 have been newly added. Support for the features recited in claims 11-16 is provided in the specification at least at page 8, line 20, through page 9, line 2. Support for the features recited in claim 17 is provided in the specification at least at page 6, lines 2-11, and page 10, lines 8-22.

In the final rejection, claims 1-3 and 6-8 were rejected, under 35 USC §102(b), as being anticipated by JP 09-092279 (hereinafter JP '279), and claims 4 and 5 were rejected, under 35 USC §103(a), as being unpatentable over JP '279 in view of Furukawa et al. (US 6,136,473). Applicants respectfully traverse. A Rule 132 Declaration is submitted herewith.

Claim 1 now recites:

A nickel positive electrode active material comprising nickel hydroxide particles and at least one rare earth compound, the at least one rare earth compound having characteristics produced by treating a rare earth oxide with an aqueous alkaline solution and an oxidizing agent.

JP '279 fails to disclose the feature recited in claim 1 of a rare earth compound that is produced by treating a rare earth oxide with an aqueous alkaline solution and an oxidizing agent.

The Final Rejection acknowledges that claim 1 defines a product produced by a different process than that used to produce the product described in JP '279 (see Final Rejection page 2, section 2, and Advisory Action). However, the Final Rejection proposes, for the purpose of overcoming the pending rejection, that Applicants provide evidence that the process recited in claim 1 produces a product that is distinct from that disclosed in JP '279 (see Final Rejection page 2, section 2, and Advisory Action).

JP '279 discloses producing a nickel hydride storage battery in Example 1 (cited in the Final Rejection at page 3, section 2) as follows. Six percent by weight metal Co and four percent by weight CoO are added as conductive agents to nickel hydroxide powder. Two and one-half percent by weight of Yb_2O_3 is also added and mixed sufficiently. To this mixture, water and a thickener are added to form a paste. The paste is applied to a nickel fiber substrate and then dried and pressed to obtain a nickel positive electrode. A nickel hydride storage battery was prepared using this nickel positive electrode, a common hydrogen absorbing alloy as a counter electrode, and an alkaline electrolyte.

From the above description, Applicants submit that it is clear that the Yb_2O_3 is not treated with an aqueous alkaline solution and an oxidizing agent before the battery is assembled (see Applicants' specification page 8, lines 5-17, for a further description of the process employed in JP '279 and the difference this process creates in the resulting product). Instead, this process is the same, in relevant part, to the process described in Applicants' specification for producing a control battery X, that was compared with a battery A that was produced in accordance with the process defined by claim 1 (see Fig. 1 and specification page 10, line 7, through page 12, line 27). The process employed in JP '279 and that of control battery X are similar in that the rare earth oxide included in the respective batteries was not treated with an aqueous alkaline solution and an oxidizing agent before assembling the battery.

The enclosed Rule 132 Declaration describes a comparative test performed by one of the present inventors. This Declaration describes the processes used for producing two batteries and the performance characteristics of each battery. These two batteries were produced by the same process, with the exception that the rare earth oxide included in battery A was treated with an aqueous alkaline solution and an oxidizing agent prior to assembling the

battery and the rare earth oxide included in battery X was not so treated prior to assembling the battery.

As described in the Declaration, battery A was produced in accordance with the process defined by claim 1, in that the rare earth oxide included in the positive electrode active material was treated with an aqueous alkaline solution and an oxidizing agent. Battery X was produced in accordance with the process described in JP '279, in that the rare earth oxide included in this battery was not treated with an aqueous alkaline solution and an oxidizing agent prior to assembling the battery. After their manufacture, batteries A and X were charged at 130 mA in temperature environments of 25°C, 45°C, 50°C, 55°C, and 60°C, respectively. The temperature was then lowered to 25°C, and the batteries were discharged at 260 mA. Fig. 1 of the Declaration illustrates the utilization ratios of the two batteries at each temperature. As may be seen in Fig. 1, battery A of the present invention was more efficiently charged at elevated temperatures and, therefore, provided greater discharge capacity than did comparative battery X.

In summary, the Declaration provides evidence that the products produced by the two different processes used to make batteries A and X have different performance characteristics. Since these two battery products have different performance characteristics, they must necessarily have different structural

characteristics. Therefore, batteries A and X do not have identical structures. And since battery X was produced, in relevant part, in accordance with the process described in JP '279, it necessarily follows that battery A, which was produced in accordance with claim 1, is not identical to the battery disclosed in JP '279.

Based on this evidence, Applicants submit that JP '279 does not anticipate the nickel positive electrode active material defined by claim 1. Therefore, allowance of claim 1 and all claims dependent therefrom is warranted.

Independent claim 8 recites all of the features of claim 1. Thus, claim 8 also distinguishes over JP '279, and allowance of claim 8 and all claims dependent therefrom is warranted.

Claim 9 recites a nickel positive electrode active material comprising nickel hydroxide particles and at least one rare earth hydroxide precursor. As defined in the specification, a rare earth hydroxide precursor is a substance obtained by treating a rare earth oxide with an aqueous alkaline solution and an oxidizing agent. Based on this definition, claim 9 recites the features distinguishing claim 1 from JP '279. Therefore, allowance of claim 9 and all claims dependent therefrom is warranted.

Independent claim 17 defines a process for producing an electrode active material. The combined disclosures of JP '279 and


Furukawa fail to suggest the features recited in new claim 17 of:

(a) treating a rare earth oxide with an aqueous alkaline solution and an oxidizing agent; (b) producing a mixture of the rare earth oxide treated in step (a) and nickel hydroxide particles; and (c) applying the mixture to a substrate to produce the electrode active material. Therefore, allowance of claim 17 is warranted.


In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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